

CMPI Examination 2010
Paper I – General Medical Physics
(Sample)

Time: 1 hour 30 minutes
Total marks: 75.

Section I - Answer all question

Marks 25 x 1 = 25

25 objective type questions - Sorry no samples here.

Section II - Answer all question

Marks 5 x 2 = 10

1. What is a latent image?
2. Define optical Density
3. What is auto transformer?
4. What are TE and TR in Magnetic Resonance Imaging?
5. Define pair production

Section III – Answer any four

Marks 4 x 5 = 20

1. What are the advantages of green sensitive film over blue sensitive films?
2. What is a photostimulable phosphor plate?
3. What is thermoluminescent dosimeter?
4. What is a color Doppler?
5. Explain the principle of SPECT
6. What are the desirable characteristics for selection of radioisotopes for Imaging?

Section IV – Answer any two

Marks 2 x 10 = 20

1. (a) Which type of interaction is useful in radiological imaging and how?
(b) Write a note on multi-detector CT and its advantages?
2. (a) Write a note on the ultrasound transducer
(b) Write a note on statistics of isotope counting
3. Define physical, biological and effective half lives. Explain how the effective half life could be calculated.